

REMARKS

Very thanks for Examination's suggestion and thanks for finding some citations about the present invention, thereby, the applicant may know more information about the invention. This case has been carefully reviewed and analyzed in view of the office action. Thus the applicant has more information about the invention. All details of the reference prior arts are fully considered and compared with the present invention.

The applicant decides to amend the claims 1 as the following, and claims 2 is remained as the original form. The amendment of the claim 1 is based on the feature in the original Fig. 2. Thus no new matter is added. The relation of the new claims with respect to the original claims are shown in the following.

CLAIMS WITH NUMERALS AND SHOWING CHANGE FROM THE PREVIOUS CLAIMS FOR THE DISCUSSION IN THE REMARK

Claim 1 (Currently Amended) A locking structure for combing a hook and a hanging ring comprising:

a hook member 1 having a cylindrical locking section extending from a top thereof, the locking section 11 including a through hole 111 which runs radially through a cross-section of the locking section 11; the locking section 11 having threads at an outer surface;

a hanging ring 2 including a ring coupler 21 capable of being mounted onto the threaded outer surface of the locking section 11;

a screw nut 3 having a plurality of radially distributed blocks 31 formed on an upper end thereof, spaces between adjacent blocks defining a plurality of radially distributed retaining slots 311; and

the inner wall of the blocks 31 being threaded and a bottom surface of the screw nut 3 being resisted against an upper surfaces of the surface of the ring coupler 21;

a spring lock pin 4 capable of being inserted into the through hole 111 of the locking section 11;

the locking section 11 of the hook member 1 being inserted through the ring coupler 21 of the hanging ring 2 and connecting the screw nut 3, the screw nut 3 being twisted and moved along the locking section 11 to align two opposite retaining slots 311 thereon with the through hole 111 of the locking section 11, the spring lock pin 4 being inserted through the through hole 111 and those two opposite retaining slots 311 so as to lock the hook member 1 and the hanging ring 2 together; the screw nut 3 being screwed with the locking section 11 and the ring coupler 21 being engaged at the outer threads of the locking section 11; and

whereby self-gravity of the hook member 1 will cause the screw nut 3 to move downward with respect to the ring coupler 21 of the hanging ring 2 so that the spring lock pin 4 resists against an upper horizontal face of the screw nut 3 and thus secured, without a riveting mechanism in conventional locking structures for combing a hook and a hanging ring process.

Claim 2. (Original) The locking structure for combing a hook and a hanging ring of claim 1, wherein the spring lock pin has a length equal to a diameter of the radially distributed blocks so that the spring lock pin 4 is not likely to collide with a foreign object and falls off the screw nut.

(A) Amendment of claim 1

The amendment of claim 1 is

“a hanging ring 2 including a ring coupler 21 capable of being mounted onto the threaded outer surface of the locking section 11; “

“the inner wall of the blocks 31 being threaded and a bottom surface of the screw nut 3 being resisted against an upper surfaces of the surface of the ring coupler 21;”

These amendment is illustrated in Figs. 1 and 2 of the present invention.

(B) DISCUSSION ABOUT THE NOVELTY OF THE PRESENT INVENTION

(1) In the present invention, “a screw nut 3 having a plurality of radially distributed blocks 31 formed on an upper end thereof, spaces between adjacent blocks defining a plurality of radially distributed retaining slots 311,”

This feature is illustrated in Fig. 1 of the present invention. However for the only citation USP2,493,282, it dose not disclosed that the screw nut 5 has a plurality of distributed block 31 and spaces between the adjacent blocks defining a plurality of slots (as 311 in the present invention). From line 31 to 40 in column 2 of the citation ‘282, it just states that there are apertures in the nut 25. No any portion in the citation ‘282 discloses about structure of the present invention.

Furthermore, in citation USP 4,174,132, the nut 23 (referring to Fig. 1 of the citation) still has no radially distributed blocks.

In the present invention, there are a plurality of retaining slots 311, see Fig. 2 of the present invention, and thus the pin 4 can inserted into the nut from different orientation. Thereby the nut 3 can screw the locking section 11 from different orientations. However this is encountered in practical situation. The citation ‘282 makes the nut 25 to screw section 14 in a predetermined orientation. It is possible that the orientation can not make the nut 25 screw the section 14 tightly, and thus the user must further screw the nut, but it is impossible that the nut can not screw the nut 25 through half cycle to make the aperture of the nut 25 to the aperture of the section 14. As a result, in this situation of the citation ‘282, the nut 25 only loosely engages to the section 14.

However the present invention has a plurality of slots 311 between the blocks 31 so that the orientation of the nut 3 can be adjusted to many

different orientations with respect to the section 11. This can not achieve by the citation '282.

(2) In Fig. 2, it is illustrated that "the screw nut 3 being screwed with the locking section 11 and the ring coupler 21 being engaged at the outer threads of the locking section 11;"

From the only drawing of the citation, it is illustrated that coupler 8 is coupled to the non-threaded section and it is illustrated that the coupler is very thick. This is because as illustrated in part (1) of this remark, the nut 25 of the citation '282 may be loosely engaged to the section 15 and thus a thick coupler 8 is necessary to provide a sufficient support to the section thick coupler 8 is necessary to provide a sufficient support to the section 14.

(3) A further feature of the present invention is that "a hanging ring 2 including a ring coupler 21 capable of being mounted onto the threaded outer surface of the locking section 11;"

Advantages of this design are that the positions of the hanging ring 2 and the screw nut 3 are adjustable so that the hang ring 2 and the ring coupler 21 can be adjustable to desired positions so that the length of the whole locking structure can be prolonged and shortened.

(C) RESULT

From above discussion, it is known that the combination of the two citations USP4,174,132, and USP2,493,282 still have no following feature of: "a screw nut 3 having a plurality of radially distributed blocks 31 formed on an upper end thereof; spaces between adjacent blocks defining a plurality of radially distributed retaining slots 311;"

Since in above discussion, it is apparent that no prior art has the features of the present invention, especially in claim 1. Furthermore, as we know that no other prior art has features of the present invention. Thus, the present invention is novel and inventive.

Applicant requests and authorizes Examiner to amend the claims of the present invention so that the claim can match the requirement of U. S.

Patent. **Attentions of Examiner to this matter is greatly appreciated.**
It is now believed that the subject Patent Application has been placed in
condition for allowance, and such action is respectively requested.

Respectfully submitted.

Steven Hong

Dated: 11 / 02 /2004
235 Chung – Ho Box 8-24
Taipei Taiwan R. O. C.